Comments on the Development and Screening of Remedial Alternatives Technical Memorandum
Dated March 2017
Rolling Knolls Landfill Superfund Site
Chatham, New Jersey

CDM Smith has completed the review of the subject technical memorandum and would like to provide the following comments:

General Comments:

1. Almost all in situ and ex situ treatment technologies (except for phytoremediation) for soil have been eliminated. It is believed that treatment technologies such as ISCO or ex situ treatment can be effective and economical in treating targeted source areas and should not be ruled out.
2. Several in situ and ex situ chemical, physical, and biological treatment technologies for groundwater have been retained after the screening process. However, only biological treatment was incorporated into one remedial action alternative. All the other retained technologies were not utilized in the alternatives.
3. It appears that the screening process is biased towards only retaining the low-cost technologies. Many of the more effective treatment technologies (e.g., advanced oxidation process, thermal treatment) were screened out based on cost, which is contrary to the EPA guidance requirements.
4. For the soil alternatives, targeted onsite treatment should be considered.
5. For the groundwater alternatives, all active remedies rely on MNA as the main control of risks and spreading of contamination. However, there is no data or evaluation in the DSRA TM to demonstrate that MNA has been occurring at the site and it is a viable technology to achieve RAOs within a reasonable time frame. Without that information, MNA cannot be justified. Additionally, the COCs in the groundwater include benzene, 1,4-dioxane, PCBs, dichlorodifluoromethane, trichlorofluoromethane, bis(2-chloroethyl)ether, indeno(1,2,3-cd)pyrene, and metals. Out of the list of COCs, benzene is the only one known to degrade naturally. All other COCs are not known to degrade naturally, in particular PCBs and metals. Given this fact, MNA is not a viable technology to provide the main control of site risks and migration of contaminants.
6. Section 5.1, page 27, end of second paragraph - The text states that "the presumptive remedy for CERCLA municipal landfill sites is containment". However, the presumptive remedy should include preventing direct contact with landfill contents, minimizing infiltration and resulting contaminant leaching to groundwater, controlling surface water runoff and erosion, collecting and treating contaminated groundwater and leachate to contain the contaminant plume and prevent further migration from source area, and controlling and treating landfill gas. The proposed alternatives lack one or more of the required components.
7. There are insufficient details in the alternative descriptions to provide meaningful evaluation of the alternatives. For example, please provide the targeted treatment areas, the depth, the volumes, and the COCs in each area under Alternative 3.
8. The DSRA did not include development of preliminary remediation goals (PRGs) and also areas and volumes of remediation based on the PRGs.

9. Many of the EPA comments on the Technical Memorandum on Candidate Technologies dated March 2012, Revised March 2015 are still applicable to this DSRA, in particular the technology evaluation regarding which class of COCs will be addressed by a particular technology. For example, biological treatment was retained incorporated into Alternative 4 for treatment of groundwater. A general statement was made that biological treatment would be effective for site COCs. However, it is generally known that PCBs and metals will not be treated by biological treatment, yet no other technologies were incorporated into this alternative to treat other classes of COCs.

Specific Comments:

1. Page 10, Section 3.1.1, first list of bullets: Add a bullet that states "An adolescent and/or adult hunter on the Landfill".
2. Page 10, Section 3.1.1, Future On-Site Residential Development Scenario, first bullet: Revise the text to state "...in the potentially developable area (defined as the landfill areas..."
3. Section 5.5.2, page 31, third bullet - ISCO/ISCR and precipitations/co-precipitation were eliminated "because they are expected to be less effective than containment options." ISCO/ISCR and precipitations/co-precipitation are treatment processes while containment is a non-treatment. The two technologies should not be compared and eliminated based on cost.
4. Section 5.5.2, page 32, first bullet – The text states that "biopiles was not retained because of the long treatment time relative to other ex situ biological treatments." This is not a valid reason because all the other ex situ biological treatment technologies were eliminated.
5. Section 6.2.1, page 36, third paragraph under Alternative 3 – the text states that "thousands of truck trips to haul materials through residential areas on narrow streets not built for heavy truck traffic". Similar claims were made under Alternatives 4 and 5. Please provide details regarding areas and depths of excavations, and the volumes of soil ship offsite. It is more a reason to justify onsite targeted treatment under Alternatives 3 and 4.
6. Section 6.2.2, page 39, Alternative 4 – It is unclear if biological treatments will be effective for the site COCs. PAHs, pesticides, PCBs and metals are not known to be degraded using biological treatment. Other treatment technologies will be needed for these COCs.